



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,243	06/13/2001	Shankar Moni	14531.99	5068

47973 7590 01/26/2005

WORKMAN NYDEGGER/MICROSOFT  
1000 EAGLE GATE TOWER  
60 EAST SOUTH TEMPLE  
SALT LAKE CITY, UT 84111

EXAMINER

PHILIPPE, GIMS S

ART UNIT PAPER NUMBER

2613

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/880,243

**Applicant(s)**

MONI ET AL.

**Examiner**

Gims S Philippe

**Art Unit**

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 16 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-20, 22-25, 35-43 and 45-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35-42 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-12, 17-20, 22, 24, 25, 43, 45, 47 and 48 is/are rejected.
- 7) ☒ Claim(s) 13-16, 23, 46 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

Art Unit: 2613

***Response to Amendment***

Applicant's remarks with respect to claims 1-7, 9-20, 22-25, 35-43, and 45-48 have been considered but are moot in view of the new ground(s) of rejection.

**Note:** The new ground of rejections is rendered necessary in view of a newly found reference during an updated search. The examiner apologizes for the inconvenience, which that may cause the Applicant because of the previously indicated allowable claims.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 9-12, 17-20, 22, 24-25, 43, and 45, 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanamura et al. (US Patent no. 6587508) in view of Werner et al. (US Patent no. 6668088).

Regarding claims 1, 9, and 17, Hanamura discloses a system including a compressed video stream that has a bit rate that is higher than a desired bit rate (See col. 11, lines

Art Unit: 2613

18-24), a method for transcoding the video stream such that the bit rate of the video stream is reduced (See col. 11, lines 30-43), the method comprises the acts of obtaining original sets of quantized transform coefficients from the video stream (See col. 13, lines 7-17), updating an original quantization level of the original sets of quantized transformed coefficients to a new quantization level (See col. 13, lines 18-21), generating new sets of transform coefficients to a new quantization level such that the new sets of transform coefficients are more coarsely quantized, and encoding the new transform coefficients (See col. 13, lines 34-39, col. 13, lines 40-43, and col. 15, lines 18-30).

The applicant should duly note that the transform coefficients are generated from the transform means as disclosed in col. 15, lines 18, and the updating of the scaling factor will update the quantization level.

It is noted that Hanamura is silent about computing a matrix or scale ratio between a new quantization scale/matrix and a current quantization matrix/scale as claimed.

However, Werner discloses computing a matrix or scale ratio between a new quantization scale/matrix and a current quantization matrix/scale (See figs. 2-3, and col. 4, lines 12-35).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Hanamura's transcoding steps by incorporating Werner's step of computing a matrix or scale ratio between a new

Art Unit: 2613

quantization scale/matrix and a current quantization matrix/scale. The motivation for such a modification is to reduce the error when the bit rate varies.

As per claims 2, 4, 5 and 6, Hanamura et al. further performs DCT transform, decoding the quantized coefficients, inversely quantizing the coefficients, and providing a more coarse quantization on the original coefficients (See Hanamura col. 13, lines 34-39, col. 13, lines 40-43, and col. 15, lines 18-30).

As per claims 7, 12 and 19-20, Hanamura et al. further discloses selecting a new quantization matrix and a new quantization scale (See col. 3, lines 18-35, and lines 46-55).

As per claims 10-11, 18 and 24, Hanamura further discloses inverse run-level and inverse variable length coding in fig. 1, items 51, and fig. 10, items 91 and 57.

As per claim 43, Hanamura further discloses performing an inverse variable length coding on the video stream such that the original quantized discrete cosine transform coefficients are known (See VLD 51), selecting at least one of a new quantization scale for the original quantized DCT coefficients (See IQ 53), re-quantizing the original quantized DCT coefficients using at least one of the new quantization matrix and a new quantization scale (See re-quantizer 55), and performing a variable length coding on the

Art Unit: 2613

re-quantized DCT coefficients such that the bit rate of the video stream is reduced (See VLC 57) also see col. 19, lines 1-41.

As per claim 47, the combination of the quantizer 55 and the VLC 57 inherently provides the run-level coding on the re-quantized coefficients.

As per claims 25 and 48, the motion compensation step is considered refrained from being performed since such component is not incorporated in Hanamura's transcoder as seen in fig. 5.

Regarding claims 22 and 45, most of the limitations of this claim have been noted in the above rejection of claim 43.

It is noted that Hanamura is silent about accounting for non-linearity of the original quantized DCT coefficients.

Werner discloses a transcoding method comprising the step of accounting for the linearity of the quantized coefficients (See Werner col. 10, lines 54-57).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Hanamura's transcoding steps by incorporating Werner's teaching for the purpose of providing input to a histogram building unit as taught by Werner.

Art Unit: 2613

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hanamura et al. (US Patent no. 6,587,508) in view of Werner, and further in view of Chen et al. (US Patent no. 6757648).

As per claim 3, most of the limitations of this claim have been noted in the above rejection of claim 1.

It is noted that the combination of Hanamura and Werner is silent about the transform coefficients being wavelet transform coefficients.

Chen discloses a transcoding method wherein the transform coefficients are wavelet transform coefficients (See Chen col. 3, lines 1-7).

Therefore, it is considered obvious that one skilled in the art at the time of the invention would recognize the advantage of modifying Hanamura's transforming step by providing wavelet transform coefficients in a transcoding method. The motivation for performing such a modification in Hanamura is to provide a heterogeneous transcoder able to use different format for decompression and compression as taught by Chen (See Chen col. 3, lines 40-42).

8. Claims 13-16, 23, and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


9. Claims 35-42 are allowed.

Art Unit: 2613

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gims S Philippe whose telephone number is (703) 305-1107. The examiner can normally be reached on M-F (9:30-7:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris S Kelley can be reached on (703) 305-4780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Gims S Philippe  
Primary Examiner  
Art Unit 2613

GSP

January 19, 2005